Lichen growth.—As the results of experiments and observations extending over a period of 8 years, FINK[13] has determined the rate of growth in certain crustose and foliose lichens, as determined by measurements of the diameter of the thallus, to vary from increases of 0.36 cm. per year for *Umbilicaria pustulata*, and 0.42 cm. for *Physica pulverulenta*, to 1.3 cm. per year for *Parmelia Borreri* and *P. caperata*, and 1.75 cm. for *Peltigera canina*. Some of the intermediate annual increments were 0.2–0.75 cm. for *Graphis scripta*, 0.6 cm. for *Verrucaria muralis*, and 1.16 cm. for *Parmelia conspersa*. In these measurements FINK has given us practically the only definite data we possess relative to the increase in size of these pioneer plants. With regard to migration, FINK declines to indulge in speculations regarding possible methods, and says "nothing is definitely known further than seeing parts of *Cladonia* thalli lying on some of the quadrats in early stages of ecesis."—GEO. D. FULLER.

Vegetation studies in Natal.—BEWS continues his interesting studies of the vegetation of Natal,[14] his latest paper dealing with the ecology of the Drakensberg.[15] These mountains exhibit picturesque and even stupendous scenery, the highest peaks being more than 11,000 ft. above the sea. The most extensive formation, as elsewhere in Natal, is the veld or grassland. The alpine veld is composed more of tussock grasses than is the lowland veld, and the growth forms are more xerophytic. An interesting formation is the *Protea* veld, dominated by various species of small trees of the genus *Protea*. The climax formation is the bush, dominated by species of *Podocarpus*, and occupying the more protected situations. The mountain top vegetation is markedly xerophytic, and is dominated by composites (as *Helichrysum*) and heathers (as *Erica*). The last section of the paper deals with successions and interrelations.—H. C. COWLES.

Tree growth in Iowa.—In presenting data upon tree growth in the vicinity of Grinnell, Iowa, CONARD[16] brings out several interesting facts in addition to the average annual increment of several species. There seems to be conclusive evidence that trees are encroaching upon the grasslands, and this is ascribed to the elimination of prairie fires during the past half century. While this accounts for the present increase of forested areas, it is not regarded as explaining the presence of grasslands which constituted the natural vegetation upon the best soils in the region. These richer soils are very favorable to tree growth and the increments are sufficiently large to indicate that timber would

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[13] FINK, BRUCE, The rate of growth and ecesis in lichens. Mycologia **9**:138–158. 1917.

[14] BOT. GAZ. **64**:85–86. 1917.

[15] BEWS, J. W., The plant ecology of the Drakensberg Range. Annals Natal Museum **3**:511–565. *pls. 4. figs. 3.* 1917.

[16] CONARD, H. S., Tree growth in the vicinity of Grinnell, Iowa. Jour. Forestry **16**:100–106. 1918.